

No. 2-2007 MONTHLY PACIFIC ENSO DISCUSSION FOR MICRONESIA AND AMERICAN SAMOA

February 2007

The Pacific ENSO Applications Center (PEAC) disseminated the first quarter 2007 newsletter (refer to <http://www.soest.hawaii.edu/MET/Enso/peu/update.html>) and is preparing a special bulletin/update. The Climate Prediction Center (CPC) stated the following in its February 8, 2007 *ENSO Diagnostic Discussion* (refer to <http://www.cpc.ncep.noaa.gov>): “A transition from weak El Niño conditions to ENSO-neutral conditions is expected by March-May 2007. SST anomalies decreased across the entire equatorial Pacific during January. However, positive anomalies between +0.5°C and 1°C remain in most of the equatorial Pacific between 170°E and the South American Coast.” The cooling of the SSTs during the last two months has been accompanied by rising values of the Southern Oscillation Index (SOI), a shutdown of the eastward transport of upper ocean heat content, and stronger than normal low-level equatorial easterly winds. The CPC further observes that: “These trends in surface and subsurface ocean temperatures indicate that the warm episode (El Niño) is weakening.”

Most of the latest climate forecast models predict that El Niño will continue to weaken and will become ENSO-neutral during March-May 2007. Climate models generally cannot predict beyond the May-June timeframe with much skill, so “there is considerable uncertainty in the forecast periods after May 2007”. Historically, atmospheric influences of El Niño linger a month or two after the ocean returns to ENSO-neutral status.

Tropical cyclone activity in Micronesia appears to be over until at least the late northern hemisphere spring or early summer. American Samoa, however, will likely experience some more tropical cyclone activity over the next 2-3 months as the monsoon trough is displaced eastward due to the effects of the waning El Niño. American Samoa will experience greater than normal rainfall. The large warm pool of water that hovered near the equator and dateline for the latter half of 2006 has migrated to the southern hemisphere. This will bring drier conditions to the Marshall Islands. We expect drier than normal conditions into May in most locations of Micronesia north of 6°N, especially in the eastern half of the region. We also anticipate drier than normal conditions for the Marshall Islands north of 10°N through June and for the Mariana Islands through July. Most locations will average about 60% of normal rainfall during the period, with the possibility of 1-2 months being below 50%. Conditions are likely to be a little drier in the eastern locations (Republic of the Marshall Islands) and a little wetter in the western locations (Republic of Palau and Yap State). We recommend that all locations in Micronesia that have limited water resources implement procedures to conserve those water resources. This is important for the low islands/atolls (especially the highly populated islands of Majuro and Ebeye) and for the high islands of Chuuk and Saipan.

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Coordinated with the Climate Prediction Center and the Pacific ENSO Applications Center.